



V \$ SECTOR  
#4  
60,130-984

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Le Hir, et al.  
Serial No.: 09/760,017  
Filed: January 12, 2001  
Priority FR 00 00412 Filed January 13, 2000  
Group Art Unit: Unknown  
Examiner: Unknown  
Title: GEAR SYSTEM FOR VEHICLE

**PRELIMINARY AMENDMENT**

Assistant Commissioner of Patents  
Washington, D.C. 20231

Dear Sir:

Please amend the application in the following particulars prior to Examination.

**IN THE SPECIFICATION:**

Page 1, please insert the title of the invention:

**“MOTORIZED REDUCTION GEAR INTENDED FOR FUNCTIONAL EQUIPMENT OF  
MOTOR VEHICLES”**

Page 1, following the title of the invention, please insert the following section heading:

**--BACKGROUND OF THE INVENTION--.**

Page 1, line 32, please insert the following section heading:

**--SUMMARY OF THE INVENTION--.**

Please replace Page 1, Paragraph 5, beginning on Line 32:

According to the invention, a magnetic ring is attached to the commutator of the shaft.

Please replace Page 2, Paragraph 1, beginning on Line 1:

According to one embodiment of the invention, the magnetic ring is overmolded on the body of the commutator.

Please replace Page 2, Paragraph 2, beginning on Line 4:

According to a second possible embodiment, the magnetic ring is housed in an annular recess which is on the body of the commutator, on which it is adhesively bonded or overmolded.

Page 2, line 8, please insert the following section heading:

**--BRIEF DESCRIPTION OF THE DRAWINGS--.**

Page 2, line 23, please insert the following section heading:

**--DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT--.**

Please replace Page 2, Paragraph 8, beginning on Line 27:

The motorized reduction gear 1 comprises, housed inside a casing which can be powered by electrical connections, a stator 3 and a rotor 4 provided with a rotor shaft 5, the ends of which are mounted in rolling bearings 6, 7. This rotor shaft 5 bears a worm 8 engaged with a gearwheel which can drive an output member, which itself drives the equipment associated with the motorized reduction gear 1, for example, a window lifter.

Please replace Page 3, Paragraph 2, beginning on Line 3:

The motorized reduction gear 1 is provided with a magnetic ring 14 mounted, according to the prior art of the invention as illustrated in Figure 1, on the part of the shaft 5 between the commutator 9 and a rolling bearing 15 housed in the reduction gearbox 13. The magnetic ring 14 is held in place by means of the longitudinal notches 16 in the shaft 5 and has the function of enabling the rotation rate of the shaft 5 to be measured, in combination with known means.

Please replace Page 3, Paragraph 4, beginning on Line 21:

In the second embodiment of the invention, illustrated in Figure 3, the magnetic ring 19 is housed in an annular recess 21 which is on the body 22 of the commutator 23 at the end of it which is free of hooks 11. The ring 19 is attached within the recess 21 by adhesive bonding or by overmolding.

Please add the following paragraph at the end of page 4:

The foregoing description is only exemplary of the principles of the invention. Many modifications and variations of the present invention are possible in light of the above teachings. The preferred embodiments of this invention have been disclosed, however, so that one of ordinary skill in the art would recognize that certain modifications would come within the scope of this invention. It is, therefore, to be understood that within the scope of the appended claims, the invention may be practiced otherwise than as specially described. For that reason the following claims should be studied to determine the true scope and content of this invention.

**IN THE CLAIMS:**

At the top of page 5, please insert:

What is claimed is:

Please amend Claim 1:

1. (AMENDED) A motorized reduction gear comprising:  
a rotor provided with a rotor shaft bearing a commutator, and a reduction gearbox containing a gearwheel engaged with a worm of said shaft, and a magnetic ring mounted on said shaft in order that the number of shaft rotations can be counted wherein said magnetic ring is attached to said commutator.

Please replace Claim 2:

2. (AMENDED) The motorized reduction gear as recited in Claim 1, wherein said magnetic ring is overmolded on said body of said commutator.

Please replace Claim 3:

3. (AMENDED) The motorized reduction gear as recited in Claim 1, wherein said magnetic ring is housed in an annular recess located on said body of said commutator, on which said magnetic ring is adhesively bonded.

Please replace Claim 4:

4. (AMENDED) The motorized reduction gear as recited in Claim 1, wherein said annular recess is at an end of said commutator which is free of hooks for retaining a plurality of electrical connectors of said rotor.

Please replace Claim 5:

5. (AMENDED) The motorized reduction gear as recited in Claim 1, wherein said magnetic ring is elastically clipped onto an annular extension of said commutator.

Please replace Claim 6:

6. (AMENDED) The motorized reduction gear as recited in Claim 1, wherein said magnetic ring is attached to one end of said commutator by at least two screws substantially parallel to an axis (XX) of said commutator.

Please add Claim 7:

7. (NEW) The motorized reduction gear as recited in Claim 1 wherein said magnetic ring is housed in an annular recess located on said body of said commutator, on which said magnetic ring is overmolded.

**IN THE ABSTRACT:**

Please delete the abstract and substitute the following:

--Motorized reduction gear intended for functional equipment of a vehicle, comprising a rotor provided with a rotor shaft bearing a commutator, and a reduction gearbox containing a gearwheel engaged with a worm belonging to the shaft, and also a magnetic ring mounted on the shaft in order that the number of shaft rotations can be counted, characterized in that the magnetic ring is attached to the commutator. The ring can be attached in various ways, for example by overmolding on the body, the ring lying over virtually the entire length of the body and the hooks for retaining the electrical connection of the rotor being attached to the magnetic ring. The attachment of the ring directly on the commutator, of which it forms an integral part, makes it possible to ensure reliable and lasting retention of the ring.--.

**REMARKS**

By this amendment, claims 1-6 have been amended. New claim 7 has been added.

The multiple dependent claims have been removed by the preliminary amendment. As the multiple dependent claims have been removed, no further fee is required. The Commissioner is authorized to charge Deposit Account No. 50-1482, in the name of Carlson, Gaskey & Olds, P.C., for any additional fees or credit the account for any overpayment.

Applicant respectfully requests examination of this application.

Respectfully submitted,

**CARLSON, GASKEY & OLDS, P.C.**

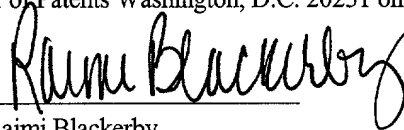


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Dated: March 16, 2001

**CERTIFICATE OF MAILING**

I hereby certify that this Preliminary Amendment is being deposited with the U.S. Postal Service as first class mail in an envelope addressed to Assistant Commissioner of Patents Washington, D.C. 20231 on March 16, 2001.



Raimi Blackerby

**VERSION WITH MARKINGS TO SHOW CHANGES MADE****SPECIFICATION**

Page 1, please insert the title of the invention:

**“MOTORIZED REDUCTION GEAR INTENDED FOR FUNCTIONAL EQUIPMENT OF  
MOTOR VEHICLES”**

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**--SUMMARY OF THE INVENTION--.**

Please replace Page 1, Paragraph 5, beginning on Line 32:

According to the invention, a [the] magnetic ring is attached to the commutator of the shaft.

Please replace Page 2, Paragraph 1, beginning on Line 1:

According to one embodiment of the invention, the magnetic ring is overmolded  
[overmoulded] on the body of the commutator.

Please replace Page 2, Paragraph 2, beginning on Line 4:

According to a second possible embodiment, the magnetic ring is housed in an annular  
recess which is on the body of the commutator, on which it is adhesively bonded or overmolded  
[overmoulded].

Page 2, line 8, please insert the following section heading:

**--BRIEF DESCRIPTION OF THE DRAWINGS--.**



Page 2, line 23, please insert the following section heading:

**--DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT--.**

Please replace Page 2, Paragraph 8, beginning on Line 27:

The motorized reduction gear 1 [It] comprises, housed inside a casing which can be powered by electrical connections [(not shown)], a stator 3 and a rotor 4 provided with a rotor shaft 5, the ends of which are mounted in rolling bearings 6, 7. This rotor shaft 5 bears a worm 8 engaged with a gearwheel [(not shown)] which can drive an output member [(also not shown)], which itself drives the equipment associated with the motorized reduction gear 1, for example, a window lifter.

Please replace Page 3, Paragraph 2, beginning on Line 3:

The motorized reduction gear 1 is provided with a magnetic ring 14 mounted, according to the prior art of the invention as illustrated in Figure 1, on the part of the shaft 5 between the commutator 9 and a rolling bearing 15 housed in the reduction gearbox 13. The magnetic ring 14 is held in place by means of the longitudinal notches 16 in the shaft 5 and has the function of enabling the rotation rate of the shaft 5 to be measured, in combination with known means [(not shown)].

Please replace Page 3, Paragraph 4, beginning on Line 21:

In the second embodiment of the invention, illustrated in Figure 3, the magnetic ring 19 is housed in an annular recess 21 which is on the body 22 of the commutator 23 at the end of it

which is free of hooks 11. The ring 19 is attached within the recess 21 by adhesive bonding or by overmolding [overmoulding].

Please add the following paragraph at the end of page 4:

The foregoing description is only exemplary of the principles of the invention. Many modifications and variations of the present invention are possible in light of the above teachings.

The preferred embodiments of this invention have been disclosed, however, so that one of ordinary skill in the art would recognize that certain modifications would come within the scope of this invention. It is, therefore, to be understood that within the scope of the appended claims, the invention may be practiced otherwise than as specially described. For that reason the following claims should be studied to determine the true scope and content of this invention.

**VERSION WITH MARKINGS TO SHOW CHANGES MADE****CLAIMS**

At the top of page 5, please insert:

–What is claimed is:--.

Please replace Claim 1:

1. (AMENDED) A motorized [Motorized] reduction gear [(1) intended for functional equipment of a vehicle,] comprising:

a rotor [(4)] provided with a rotor shaft [(5)] bearing a commutator [(9)], and a reduction gearbox [(13)] containing a gearwheel engaged with a worm [(8)] of said [the] shaft, and [also] a magnetic ring [(14)] mounted on said [the] shaft in order that the number of shaft rotations can be counted, wherein [characterized in that] said [the] magnetic ring [(17; 19, ...)] is attached to said [the] commutator [(9, 23, ...)].

Please replace Claim 2:

2. (AMENDED) The motorized [Motorized] reduction gear as recited in [according to] Claim 1, wherein said [characterized in that the] magnetic ring [(17)] is overmolded [overmoulded] on said [the] body [18]] of said [the] commutator [(9)].

Please replace Claim 3:

3. (AMENDED) The motorized [Motorized] reduction gear as recited in [according to] Claim 1, wherein said [characterized in that the] magnetic ring [(19)] is housed in an annular recess [(21)] located [which is] on said [the] body [(22)] of said [the] commutator [(23)], on which said magnetic ring [it] is adhesively bonded [or overmoulded].

Please replace Claim 4:

4. (AMENDED) The motorized [Motorized] reduction gear as recited in [according to] Claim 1, wherein said [characterized in that the] annular recess [(21)] is at an [one] end of said [the] commutator [(23)] which is free of hooks [(11)] for retaining a plurality of [the] electrical connectors of said [the] rotor [(4)].

Please replace Claim 5:

5. (AMENDED) The motorized [Motorized] reduction gear as recited in [according to] Claim 1, wherein said [characterized in that said the] magnetic ring [(24)] is elastically clipped onto an annular extension [(25)] of said [the] commutator [(20)].

Please replace Claim 6:

6. (AMENDED) The motorized [Motorized] reduction gear as recited in [according to] Claim 1, wherein said [characterized in that the] magnetic ring [(28)] is attached to one end of said [the] commutator [(29)] by at least two screws [(31)] substantially parallel to an [the] axis (XX) of said [the] commutator.

Please add Claim 7:

7. (NEW) The motorized reduction gear as recited in Claim 1 wherein said magnetic ring is housed in an annular recess located on said body of said commutator, on which said magnetic ring is overmoulded.